HU718 TMA/REIR



Thermo Retec W.O. No. R0-02-024-7345

EDMC

Bechtel Hanford Inc. SDG H0728

Page 1 of 1

Case Narrative

1.0 GENERAL

Bechtel Hanford Inc. (BHI) Sample Delivery Group H0728 is composed of one liquid (water) samples designated under SAF No. C00-002 with a Project Designation of: 200 UP1 IAM GW Sampling, October 1999.

The sample was received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the TNU Sample Receipt Checklist. The results were transmitted to BHI via facsimile on March 1, 2000.

2.0 ANALYSIS NOTES

2.2 Technetium-99 Analyses

There was contamination in the method blank. The activity was above the RDL (15 pCi/L) for Tc-99. The activity in the method blank is probably from a long-lived isotope in the tracer. No other problems were encountered during the course of the analyses.



SAMPLE DELIVERY GROUP H0728

SDG 7345 Contact Melissa C. Mannion

SAMPLE SUMMARY

Client Hanford
Contract TRB-SBB-207925
Case no SDG H0728

CLIENT SAMPLE ID	LOCATION	MATRIX LEVEL	LAB SAMPLE ID	SAF NO	CHAIN OF CUSTODY	COLLECTED
BOWKT1	Hanford Site	WATER	RG02024-01	C00-002	C00-002-17	01/26/00 08:50
Method Blank		WATER	R002024-03	C00-002		
Lab Control Sample		WATER	R002024-02	C00-002		
Duplicate (R002024-01)	Hanford Site	WATER	R002024-04	C00-002		01/26/00 08:50

SAMPLE SUMMARY
Page 1
SUMMARY DATA SECTION
Page 3

 Lab id
 TMANC

 Protocol
 Hanford

 Version
 Ver 1.0

 Form
 DVD-CS

 Version
 3.06

 Report date
 03/01/00

SAMPLE DELIVERY GROUP H0728

SDG 7345
Contact Melissa C. Mannion

QC SUMMARY

Client <u>Hanford</u>

Contract <u>TRB-SBB-207925</u>

Case no <u>SDG H0728</u>

ос ватсн	CHAIN OF CUSTODY	CLIENT SAMPLE ID		MPLE BASIS	DAYS SINCE		DEPARTMENT SAMPLE ID
7345	C00-002-17	BOWKT1	WATER		02/02/00 7	R002024-01	7345-001
		Method Blank Lab Control Sample Duplicate (R002024-01)	WATER WATER WATER		02/02/00 7	R002024-03 R002024-02 R002024-04	7345-003 7345-002 7345-004

QC SUMMARY

Page 1

SUMMARY DATA SECTION

Page 4

Lab id TMANC

Protocol Hanford

Version Ver 1.0

Form DVD-QS

Version 3.06

Report date 03/01/00

SAMPLE DELIVERY GROUP H0728

SDG	7345			
Contact	Melissa	C.	Mannion	_

PREP BATCH SUMMARY

Client Hanford
Contract TRB-SBB-207925
Case no SDG H0728

			PREPARATION	ERROR			PLA	NCHETS 2	ANALY2	EED -	QUALI-
TEST	MATRIX	METHOD	ВАТСН	2σ %	CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG MS/ORIG	FIERS
Beta	Counting	· · · · · · · · · · · · · · · · · · ·									
TC	WATER	Technetium 99 in Water	6914-075	10.0	1			1	1	1/1	

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group. Elank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

PREP BATCH SUMMARY

Page 1

SUMMARY DATA SECTION

Page 5

Lab id TMANC

Protocol Hanford

Version Ver 1.0

Form DVD-PBS

Version 3.06

Report date 03/01/00

SAMPLE DELIVERY GROUP H0728

SDG 7345 Contact Melissa C. Mannion

WORK SUMMARY

Client <u>Hanford</u>

Contract TRB-SBB-207925

Case no SDG H0728

CLIENT SAMPLE LOCATION CUSTODY	ID SAF No	MATRIX	LAB SAMPLE II COLLECTED RECEIVED	PLANCHET	TEST	SUF-	ANALYZED	REVIEWED	ВУ	METHOD
BOWKT1 Hanford Site C00-002-17	C00-002	WATER	R002024-01 01/26/00 02/02/00	7345-001	TC		02/22/00	03/01/00	мсм	Technetium 99 in Water
Method Blank	C00-002	WATER	R002024-03	7345-003	TC		02/24/00	03/01/00	MCM	Technetium 99 in Water
Lab Control Sa	c00-002	WATER	R002024-02	7345-002	TC		02/22/00	03/01/00	MCM	Technetium 99 in Water
Duplicate (R00 Hanford Site	02024-01) C00-002	WATER	R002024-04 01/26/00 02/02/00	7345-004	TC		02/22/00	03/01/00	MCM	Technetium 99 in Water

		COUNTS	OF TESTS	вч	SAMPLE TYPE				
TEST	SAF No	METHOD	REFERENCE		CI, JENT MORE	RE BLANK	LCS	DUP SPIKE	TOTAL
TC	C00-002	Technetium 99 in Water	TC99TRLSC		1	1	1	1	4
TOTALS				·	1	1	1	i	4

WORK SUMMARY
Page 1
SUMMARY DATA SECTION
Page 6

Lab id TMANC

Protocol Hanford

Version Ver 1.0

Form DVD-CWS

Version 3.06

Report date 03/01/00

SAMPLE DELIVERY GROUP H0728

R002024-03

METHOD BLANK

Method Blank

SDG	7345	Client/Case no	Hanford	SDG H0728
Contact	Melissa C. Mannion	Contract	TRB-SBB-207925	-
Lab sample id Dept sample id		Client sample id		WATER
Dept Sample 1a	<u>, , , , , , , , , , , , , , , , , , , </u>	,	C00-002	

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Technetium 99	14133-76-7	31.2_	6.0	12	15		TC

200-UP1-IAM GW Monitoring, Oct. 1999

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METHOD BLANKS
Page 1
SUMMARY DATA SECTION
Page 7

 Lab id
 TMANC

 Protocol
 Hanford

 Version
 Ver 1.0

 Form
 DVD-DS

 Version
 3.06

 Report date
 03/01/00

SAMPLE DELIVERY GROUP H0728

R002024-02

LAB CONTROL SAMPLE

Lab Control Sample

SDG 7345 Contact <u>Melissa C. Mannion</u>	Client/Case no <u>Hanford</u> <u>SDG R0728</u> Case no <u>TRB-SBB-207925</u>
Lab sample id <u>R002024-02</u> Dept sample id <u>7345-002</u>	Client sample id <u>Lab Control Sample</u> Material/Matrix <u>WATER</u>
	SAF No <u>C00-002</u>

ANALYTE	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ADDED pCi/L	2σ ERR pCi/L	REC	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Technetium 99	1110	42	_17	15	В	ТC	1090	44	102	83-117	80-120

200-UP1-IAM GW Monitoring, Oct. 1999

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LAB CONTROL SAMPLES $\begin{array}{ccc} Page & 1 \\ \\ SUMMARY & DATA & SECTION \\ \\ Page & 8 \\ \end{array}$

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 03/01/00

R002024-04

SAMPLE DELIVERY GROUP H0728

DUPLICATE

SDG 7345	-	Client/Case no	<u> Hanford</u>	SDG H0728
Contact <u>Melissa C. Mannio</u>	<u>n</u>	Case no	TRB-SBB-207925	_
DUPLICATE	ORIGI NAL			_
Lab sample id <u>R002024-04</u>	Lab sample id R002024-01	Client sample id	BOWKTI	
Dept sample id <u>7345-004</u>	Dept sample id <u>7345-001</u>	Location/Matrix	Hanford Site	WATER
	Received 02/02/00	Collected	01/26/00 08:50	
		Custody/SAF No	C00-002-17 C00	-002

ANAL,YTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI- FIERS	RPD	3ø PROT TOT LIMIT
Technetium 99	738	28	12	15	В	TC	728	31	_17	В	1	23

200-UP1-IAM GW Monitoring, Oct. 1999

QC-DUP#1	33371	

DUPLICATES Page 1 SUMMARY DATA SECTION Page 9

Lab id TMANC Protocol Hanford Version <u>Ver 1.0</u> Form DVD-DUP Version 3.06 Report date <u>03/01/00</u>

BOWKT1

TMA/RICHMOND SAMPLE DELIVERY GROUP H0728

R002024-01

BOWKT1

DATA SHEET

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Technetium 99	14133-76-7	728	31	17	15	В	TC

200-UP1-IAM GW Monitoring, Oct. 1999

DATA SHEETS
Page 1
SUMMARY DATA SECTION
Page 10

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-DS
Version 3.06
Report date 03/01/00

SAMPLE DELIVERY GROUP H0728

Test TC Matrix WATER SDG 7345 Contact Melissa C. Mannion

METHOD SUMMARY

TECHNETIUM 99 IN WATER BETA COUNTING Client <u>Hanford</u>
Contract <u>TRB-SBB-207925</u>
Contract <u>SDG H0728</u>

RESULTS

	LAB	RAW SUF-		Technetium
CLIENT SAMPLE ID	SAMPLE ID	TEST FIX	PLANCHET	99
Preparation batch 6914	075			
BOWKT1	R002024-01		7345-001	728
BLK (QC ID=33370)	R002024-03		7345-003	31,2
LCS (QC ID=33369)	R002024-02		7345-002	ok
Duplicate (R002024-01)	R002024-04		7345-004	ok

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST		MDA pCi/L	_	PREP		YIELD	EFF		FWHM keV			PREPARED	ANAL- YZED	DETECTOR
CHIBNI BANIAL ID	SATE IS	11551	FIA	pc1/1		FAC	TION			IIITII	NE V	VEA	пеш	FREFARED	1250	DETECTOR
Preparation batch 6914-0	75 2σ pr	ep er	ror 10	1.0 %	Reference	Lab	Notebook	6914	pg.	75						
BOWKT1	R002024-01			17	0.0500			42		101			27	02/17/00	02/22	GRB-202
BLK (QC ID=33370)	R002024-03			12	0.0500			4.8		137				02/17/00	02/24	GRB-220
LCS (QC ID=33369)	R002024-02			17	0.0500			41		101				02/17/00	02/22	GRB-203
Duplicate (R002024-01)	R002024-04			12	0.0500			61		101			27	02/17/00	02/22	GRB-221
(QC ID=33371)																
							·									
Nominal values and limit	s from metho	bd		15	0.0500			20-10	5	50			180			

PROCEDURES	REFERENCE	TC99TRLSC
	EP-020	Sample Leach For Technetium-99, rev 0
	EP-540	Technetium-99 Purification, rev 0
l		

AVERAGES ± 2 SD	MDA	_14	±	5.8
FOR 4 SAMPLES	YIELD	4.8	ŧ	18

METHOD SUMMARIES
Page 1
SUMMARY DATA SECTION

Page 11

Lab id TMANC

Protocol Hanford

Version Ver 1.0

Form DVD-CMS

Version 3.06

Report date 03/01/00

PNNL					CHAIN OF	CUSTODY/	SAMPL	E ANALY	SIS REQUEST		C.O.C. #	C00-002-17
Collector K	J. YOL	INC	````\		Contact/R		0728	(7345	Telephone No.	MSIN	FAX	
SAF No.		7140	<u> </u>		JH KES Sampling	Orlein	10100	(1010	/ (509) 375-4688 Purchase Order/Charge	Code RA	D F	10728
C00-002 Project Title					HANFO	RD SITE Vo		A			emp.	
200UPHAM GV Shipped To (Lab)		NG O	CTOBER 199	9	Method of	Win - Sul	H 30	P496 8	Bill of Lading/Air Bill N	7 2/	~~~	-1 7704
TMA/RECRA					GOVT.	VEHICLE			Offsite Property No.	423	5-775	-3 3704
Protocol CERCLA					Data Turn 45 Days				•			- 10 Lel 10 L
POSSIBLE SAMI	PLE HAZARI	DS/RE	MARKS				SPECIAL INS FAX copies of	STRUCTIONS TMA log-in to DL St	Hold Time ewart (372-1704) & JH Kessner (372-94	Total Activity 87)	е ехетрион:	Yes 🗹 No 🗌
Sample No.	Lab ID	T .	Date	Time	No/Type Container		<u></u>	Samp	ole Analysis			Preservative
B0WKT1		W	01-26-00	0850	1x20-mL P	Activity Scan		<u> </u>				None
B0WKT1		w	1	1	1x1000-mL G/P	Technetium-99			****	· · ·		HCl to pH <2
	+	+	7									
	-	 	'									
		┼─										
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Relinquished By	Print		Sjæn	<u> 1 - 7 / </u>	(Z) Date/Time 22	Received By	Print	Sign	Date/Time		Matri:	x *
معنا منا	OUNG/	ha-	1 / Oun		AN 2-6-2000	Ť,	Fed E	•	2-1-00	S ≖ Soi	1	DS = Drum Solid
Relinquished By	0.107	<u> </u>			Date/Time	Received By			Date/Time	SE = Sec SO = Sol	lid	DI. = Drum Lioui T = Tissue WI = Wine
FRA E	<u> </u>			2-	2-00 9:15	Helorso	dR. Col	(G)	2-2-27 9;15 Date/Time	S1. ≠ Shi W = Wa O = Oil	iter	I. = Liquid V = Vegetation
Relinquished By					Date/Time	Received By			L/BIC/11116	A = Air		X = Orher
Relinquished By				·	Date/Time	Received By			Date/Time			
						<u> </u>		Disposed Dr.		4	Date/Fime	
FINAL SAMPI		Method	l (e.g., Rehim to	customer, per	lab procedure, used in pro-	cess)		Disposed By				

SAMPLE RECEIPT CHECKLIST

	SAMPLE RECEIPT								
Client:	Client: Bechtal Hanford (FNNL) Date/Time received 2-2-00 9:15								
13	o. <u>C00-002-17, C00-010-2, C00-018-</u>			11					
11	ner I.D. No. GWS-137 Requested TAT (Days)			ll l					
	NSPECTION	**/							
1.	Custody seals on shipping container intact?	Yes [L]	No []	N/A []					
2.	Custody seals on shipping container dated & signed?	Yes [Li	No []	N/A[]					
з.	Custody seals on sample containers intact?	Yes [No []	N/A[.]					
4.	Custody seals on sample containers dated & signed?	Yes (LY	No []	N/A[]					
s	Cooler Temperature: Packing	g material is	s: Wet[]	Dry [44]					
6	Number of samples in shipping container:6	·							
7.	Number of containers per sample:		c						
8.	Paperwork agrees with samples?		No []						
è.	Samples have: Tape [Hazard labels [] Rad lat	els [] App	oropriate sample	labels [Z]					
10,	Samples are: In good condition [] Leaking []	Broken C	ontainer [] N	Alssing []					
11.	Describe any anomalies: Mosollartion Lin for samples BDX 646, BOX 658	io on the	e sample	labola					
				·					
iз.	Was P.M. notified of any anomalies? Yes [4]	No []	Date 2-2	-00					
14.	Received by Alexand Date	2-2-1	<u>0</u> Time: 9	15					
	LOGIN								
TNU W	'.O. No Group No	C	ient W.O. No						
-	PROGRAM MANAGI	ER							
Sample	holding times exceeded? Yes []	No ().	•						
Cilent N	Notified: Name		ate/time						